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MYCOLOGICAL BULLETIN

No. 38

W. A. Kellerman, Ph. D., Ohio State University

Columbus, Ohio, July 15, 1905

THE TWO-SPORED MOREL, MOR-CHEL′-LA BIS′-PO-RA. Not until now could I adequately report in print in reference to some curious little Morels sent from Wisconsin by Mr. A. F. Lane. They were collected the 16th of April, under an oak tree in a piece of mixed woods near Milwaukee. They were sent because of "their early appearance in the season," and because "they have characteristics not common to any of the other well-known Morels." A microscopic examination of the spores settled the identity of the species at once. Only *two spores* are contained in each ascus, whereas in the other species there are eight spores. They are therefore the botanical species known as Mor-chel′-la bis′-po-ra. The photographs made from the specimens are reproduced in Fig. 122.

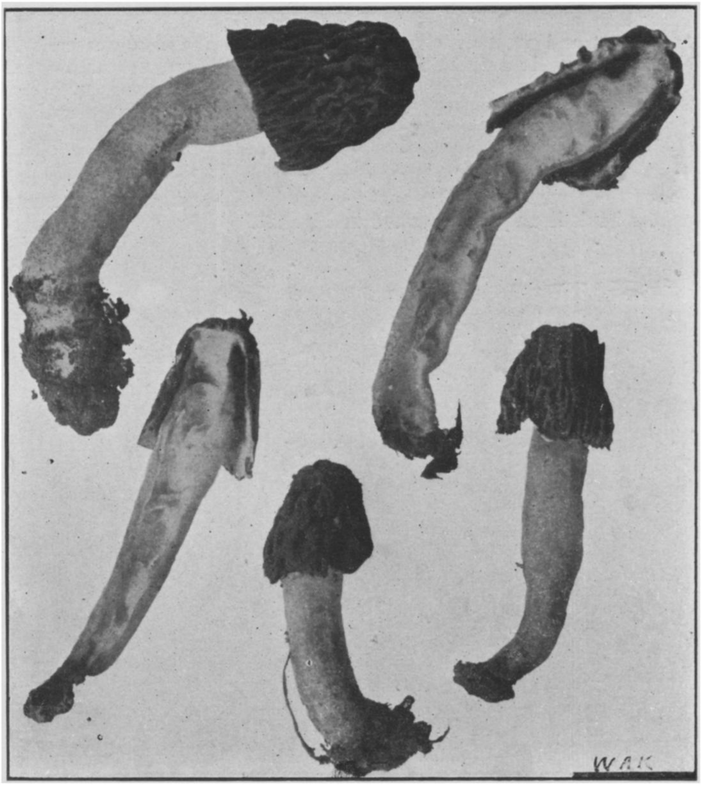

FIG. 122. MOR-CHEL′-LA BIS′-PO-RA. TWO-SPORE MOREL. The plants are shown natural size; two of the figures are vertical sections, and the attachment of the cap at the apex of the stem only is more or less distinctly seen, but the hollow stem is less clearly shown in the engraving. The photographs were made from plants sent from Wisconsin by Mr. A. F. Lane.

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PREVIOUS DISCUSSION AND ILLUSTRATION OF THE MORELS.—These plants are very interesting and naturally we expect much to be said about them in the BULLETIN. Turning back, we find that the subject has been reported in print or engravings on the following pages: 2, 5, 6, 7, 11, 13, 14, 21, 27, 129, and 135. All this with what has been added in this No. will doubtless satisfy the most exacting patron—until the Morelle season opens again next year.

THE GENUS OM-PHA′-LI-A.—These white spored Agarics are tersely described as follows by Professor Atkinson: The Genus *Omphalia* is closely related to *Mycena* and *Collybia.* It differs from these mainly in the decurrent gills. In the small species of *Mycena,* where the gills are slightly decurrent, the pileus is not umbilicate as it is in the corresponding species of *Omphalia.* In some of the species of *Omphalia* the pileus is not umbilicate, but here the gills are plainly decurrent. The stem is cartilaginous."

THE SPECIES OF OM-PHA′-LI-A.—There are between thirty-five and forty American species of this genus, some of them very common and abundant; they are usually small and occur mostly in the woods. One of the commonest and most widely distributed is Om-pha′-li-a cam-pa-nel′-la or Bell Omphalia. It may be found throughout the summer and autumn on rotten logs, stumps, etc., in shady moist woods. Its pileus is umbilicate, faintly striate and of a dull reddish color. The gills are narrow and connected by veins and decurrent on the stem. Another species is Om-pha′-li-a ep-i-chy′-si-um, distinguished by its smoky or dull gray color, the depressed or funnel-shaped pileus and short, slender stem. The species shown in this No. of the BULLETIN is Om-pha′-li-a um-bel-lif′-er-a, whose characteristic cluster habit is amply illustrated in Fig. 125.

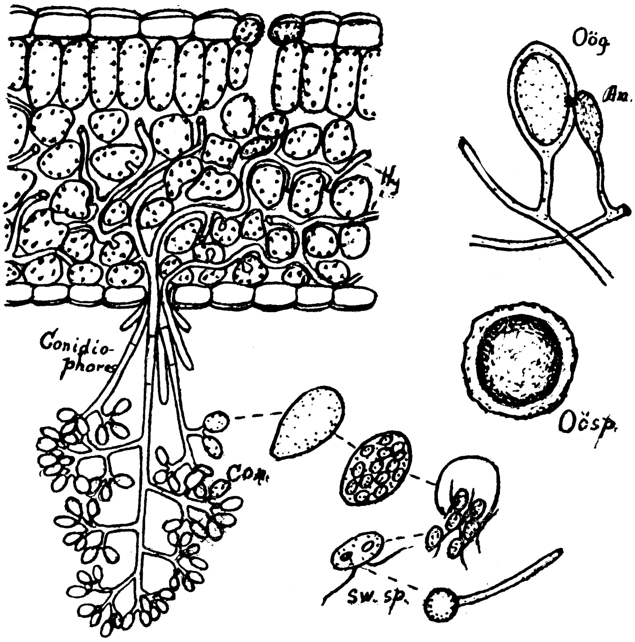

FIG. 123. GRAPE MILDEW OR PERONOSPORA. See next page.

ARE THE OMPHALIAS EDIBLE?—For this phase of the subject we will quote a good author on mycophagy, McIlvaine, who says: "Raw, the writer has not found one that is objectionable in any way; a few have a woody taste. But two species have been found by him in sufficient quantity to make a dish. It is probable that all are edible.

GRAPE MILDEW OR PERONOSPORA.—Again we interpolate a parasitic fungus that can not be called a Mushroom, but which nevertheless is very interesting both from the scientific and economic point of view. On the preceding page is given (Fig. 123) an etching which represents in a diagrammatic way, the well known enemy of the vineyards. The large figure to the left is intended to represent a magnified section through a grape leaf. The row of cells forming the protecting outer layer of the leaf above and below, is the epidermis. The cells between are full of protoplasm (not evident in the figure) and chlorophyll grains (leaf-green). Between these cells, and drawing nourishment from them, are the tube-like cells (called *hy-phae*) which form the body of the parasite. As seen it has developed upright (downright in this case) straight branching cells; all these are called *co-nid'-i-o-phores,* because they *bear* the *spores* which are called *co-nid'-i-a.* The latter are the summer spores; they germinate at once, infect other plants in the vineyard, and so multiply the parasite rapidly when climatic conditions are favorable. The remainder of the story must be told in a later No.

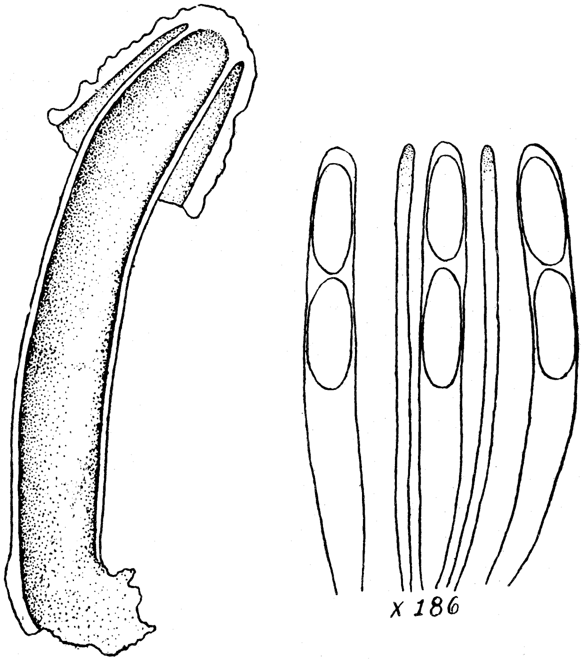

FIG. 124. MOR-CHEL'-LA BIS'-PO-RA. TWO-SPORE MOREL. A vertical section through the middle of the plant shows the interior structure. It is seen that the stem is hollow and the cap attached only at its apex. The drawings to the right show the spore cases (*as'-ci*), each containing two spores, also slender cells accompanying the asci (which may perhaps be really immature or abortive asci), called the pa-raph'-y-ses. The plant is shown natural size, but the asci and spores are represented as magnified 186 diameters.

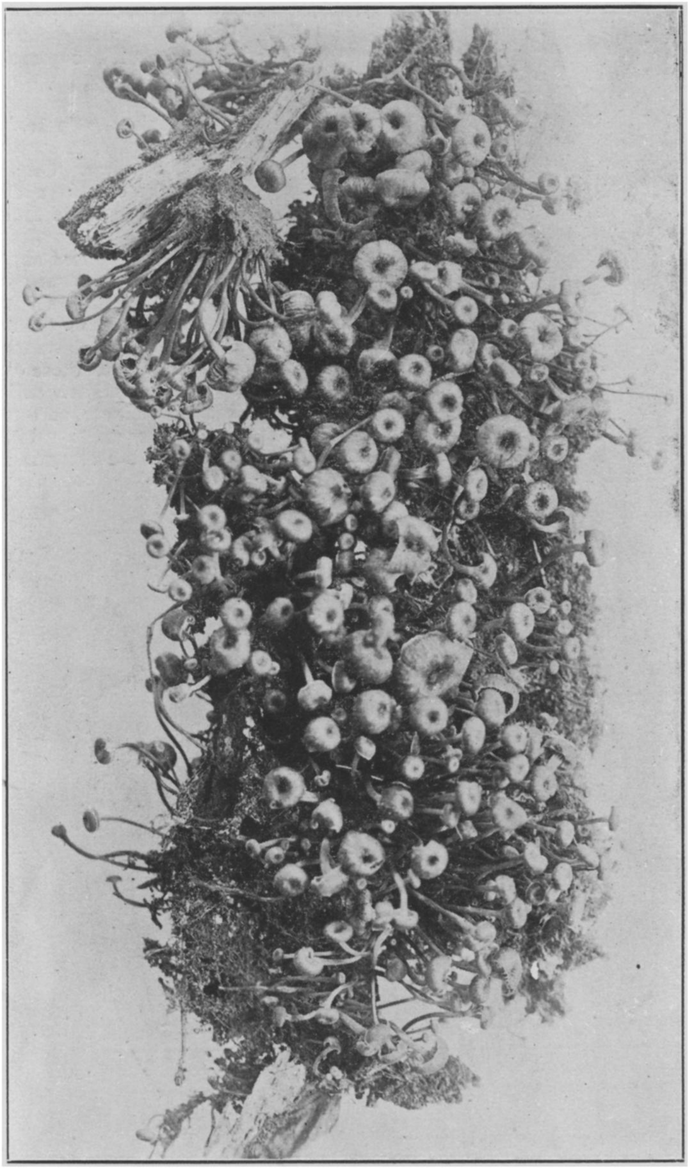

FIG. 125. OM-PHA'LI-A UM-BEL-LIF'-ER-A. Umbellate Om-pha'li-a. Growing on rotten wood in a moist, shady place near Columbus, O.

The Mycological Bulletin is issued on the 1st and 15th of each Month, Price 25c. Copies of Vol. II (1904) may be had for 50 cents each, or cloth bound copies for 75 cents. No copies remain of Vol. I (1903). Address, W. A. Kellerman Columbus Ohio.